

What is Claimed Is:

1. A method in a channel adapter configured for communications with a server network system, the method comprising:

first storing, in a table configured for storing multiple entries, an entry having a work queue entry field that specifies a transmitted work queue entry, the entry including at least first and second link fields each configured for referencing another entry in the table, the first storing step including storing in the first link field a first entry identifier for one of the transmitted work queue entry and a subsequently transmitted work queue entry relative to the transmitted work queue entry, wherein the first link entry identifiers in the respective first link fields form a first linked list specifying a transmit sequence of the transmitted work queue entries;

detecting an acknowledgement for at least a first of the transmitted work queue entries stored in the table; and

generating in the table a second linked list specifying an acknowledgement sequence of the transmitted work queue entries by second storing, in the second link field of the entry corresponding to the first transmitted work queue entry, a second entry identifier based on the detecting step, the second entry identifier specifying one of the first transmitted work queue entry and an entry having received a subsequent acknowledgement relative to the detected acknowledgement.

2. The method of claim 1, wherein the first storing step includes storing the entry in a send queue table by a free buffer manager.

3. The method of claim 1, further comprising parsing the second linked list to determine transmitted work queue entries awaiting acknowledgement.

4. The method of claim 1, wherein the detecting step includes detecting the acknowledgement according to InfiniBand™ protocol.

5. A channel adapter comprising:  
a table configured for storing entries identifying respective work queue entries having been transmitted according to a service protocol requiring receipt of an acknowledgment message, each entry including:

(1) a work queue entry field configured for specifying the corresponding work queue entry,

(2) a first link field configured for specifying a first entry identifier referencing one of the corresponding entry and another entry for a subsequently transmitted work queue entry relative to the corresponding entry, and

- 10 (3) a second link field configured for storing a second entry identifier referencing one of the corresponding entry and another entry having received a subsequent acknowledgement;

an acknowledgement detector configured for detecting the acknowledgements for the work queue entries; and

- 15 a table manager configured for adding the table entries based on transmission of the respective work queue entries, the table manager configured for inserting the corresponding first entry identifier based on the subsequently transmitted work queue entry, the table manager configured for inserting the corresponding second entry identifier based on the entry having received the subsequent acknowledgement, the first and second link fields forming first and second linked lists identifying a transmit sequence of the transmitted work queue entries and an acknowledgement sequence of the transmitted work queue entries, respectively.

6. The channel adapter of claim 5, wherein the acknowledgement detector is configured for detecting the acknowledgement according to InfiniBand™ protocol.

7. The apparatus of claim 5, wherein the table manager is configured for parsing the second linked list to determine transmitted work queue entries awaiting acknowledgement.